



## ON COMPETENCIES CHARACTERISTIC OF GEOGRAPHY IN HIGH SCHOOL

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**Abstract:** The purpose of our study was that of analysing, starting from literature, the definitions of the following concepts: capacity, skill, and competency, as well as of analysing the competencies they phrased in school curricula and those that teachers phrased. Moreover, we wanted to give appropriate examples. The hypotheses of our study were the following: they had not phrased correctly competencies in school curricula and teachers undergoing a continuous training course or programme phrased correctly the competencies characteristic of a certain field. This study had as a starting basis the concept of competency as a sum of declarative knowledge, procedural knowledge, and attitudes that were characteristic to an individual and that he or she activated (transformed and integrated) in planning and solving certain tasks (Brien, 1997) in a certain field, in a certain case. Roegiers (1998) underlined that competencies had five essential features: somebody's calling up of a sum of resources (different types of knowledge, experiences, capacities, schemes, automatisms, etc.); finalised character; relation to a sum of situations; frequent subject matter features; it could be assessed. To all these features we added another one, that of the level of competency. In order to reach the above-mentioned purposes and for verifying our hypotheses, we analysed the competencies in the high school curricula and the competencies that 9 Geography teachers phrased, after undergoing a continuous teacher training course on the "Development of Subject Matter Skills and Competencies". We concluded that taking into account the features of the competency that Roegiers identified, they did not phrase correctly those competencies and that hindered high school students' development and assessment. Out of the particular competencies in the curriculum for Geography, in high school, we considered to be phrased correctly or partially correctly only 5 for the 9<sup>th</sup> grade, 1 for the 10<sup>th</sup> grade, 4 for the 11<sup>th</sup> grade, and 8 for the 12<sup>th</sup> grade. We noticed that: teachers presented lists including different competencies; they included competencies listed in our course, but without inserting all the possible ones and added new competencies; they included both subject matter competencies and non subject matter ones (or general ones); the group of teachers phrased 41 subject matter competencies and 48 general ones and phrased incorrectly 22 competencies, and these demonstrated that this course was an efficient one.

**Zusammenfassung:** Observationen über spezifische Konzepte in Geographie im Gymnasium. Ziel dieser Studie ist die Analyse verschiedener Bibliographien, Definitionen von Konzepten wie: Kapazität, Abiltät, Kompetenz von verschiedenen Konzepten aus schulischen Programmen (Curriculum im Gymnasium, und diejenigen, die die Lehrer für die verschiedenen Vergleichsanalysen und Beispiele entwickelt haben. Diese Analyse zeigt, dass verschiedene Hypothesen in schulischen Programmen (Curriculum) nicht immer korrekt dargestellt sind und dass die Lehrer, die an einer Fortbildung teilnehmen, danach ein besseres, geeignetes Konzept in Folge formulieren. Diese Fallstudie bezieht sich auf Kompetenz in einer Form von verschiedenen deklarativen, integrativen Kenntnissen einer korrekte Planung und Bearbeitung, geeignet für ein genaues Gebiet und eine genaue Situation (Brienne 1997). Nach Roegers (1998) beinhaltet eine Kompetenz fünf verschiedene Charakteristika: Mobilisierung verschiedener Ressourcen (verschiedene Kenntnisse, Typen, Erfahrungen, Automatismen etc.), manchmal mit einem disziplinären Charakter, Evaluation und Kompetenz. Ziel ist die Auswertung verschiedener Hypothesen. Dafür ausgewertet wurden die Kompetenzen aus schulischen Programmen (Curriculum), speziell im Gymnasium, und die Vorschläge von neuen Geographielehrern nach einem Fortbildungsprogramm formuliert (Entwicklung von Fähigkeiten und Hochkompetenzen). Als Fazit, wenn wir die Identifikationskompetenzen beachten, die von Roegers vorgeschlagen wurden – die allgemeinen Kompetenzen nicht korrekt formuliert oder nur teilweise korrekt formuliert sind: 5 Kompetenzen in der 9. Klasse, eine in der 10. Klasse, 4 in der 11. Klasse und 8

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in der 12. Klasse. In den vorgeschlagenen Kompetenzen der Lehrer sind zu beachten: Fehler an verschiedenen Kompetenzen, es würden verschiedene Vorschläge in einer Beispielliste gemacht und andere neue Vorschläge hinzugefügt und wurden auch disziplinäre und adisziplinäre Kompetenzen beigefügt. Die Lehrer haben 41 disziplinäre Kompetenzen formuliert, 48 adisziplinäre Kompetenzen und 22 Generalkompetenzen (davon 14 von einem einzigen Lehrer vorgeschlagen). Das zeigt, dass diese Fortbildungsmaßnahme ein Erfolg war.

**Key words:** capacity, skill, subject matter competency, general/non subject matter competency

### 1. Introduction

While studying high school curricula we noticed that they phrased inappropriately many competencies and that was why teachers had difficulties in helping their students develop. Moreover, we noticed that teachers did not know exactly what the sense of the word *competency* was, they did not know how to establish correct relationships between competencies and objectives, and they could not give examples of competencies that one could achieve in a certain scientific field.

First, starting from these premises, from the hypothesis that bibliography included enough definitions of competencies in order to offer the pertinent information to authors of school curricula and of textbooks as well as to teachers, the main purpose of this study was to define the following concepts starting from literature and from our analysis: capacity, skill, and competency. Secondly, having in view the hypothesis that in school curricula they did not phrase correctly competencies, the second purpose of our study was to analyse the competencies they phrased in high school curricula, to identify the correct and partially correct ones and to offer the most suitable examples. Finally, taking into account the hypothesis that the teachers that were undergoing a teacher training course phrased correctly the competencies characteristic of a certain field, our third purpose in this study was to assess to what extent Geography teachers who received information on the concept of competency and appropriate examples were able to phrase the competencies that those who studied Geography had to achieve.

### 2. Theoretical basis

On the basis of literature and after assessing the respective sources, we selected the most significant ones on capacity, skill, and competency.

In dictionaries, the concept of *capacity* had diverse attributes: the possibility of working in a certain field, of realising something; somebody's possibility, a moral and intellectual attribute; aptitude (DEX, 1998); possibility of realising something in a certain field; aptitude; attribute of understanding the essence of things; competency (NODEX); skill, ability, aptitude, power of doing something in a certain field (DN); mastery, ability, aptitude of doing something; somebody's quality of doing something; quality of the one capable of understanding or doing something (MDN). Capacity has the following synonyms: force, possibility, power (~ *to do something*); potential (~ *to work*), competency, efficiency, mastery (Sinonime). Meirieu considered capacity as "a permanent intellectual activity that one can reproduce in different knowledge fields", and also considered the term as synonym to "savoir-faire", and it manifested itself only with using certain contents (1987, p. 181). Roegiers (2000) considered capacity as an activity that we exercised, for instance, in order to identify, to analyse, to compare, to memorise, to classify, to synthesise, to abstract, to observe, to put in order, etc. (Dulamă, 2007). After analysing the previous definitions we considered that capacity was the power or aptitude to feel, understand or do something. In conclusion, capacity was an individual's neuropsychical attribute (power and quality) that gave that person the opportunity to do operations, activities, to have certain relationships and social behaviour (Dulamă, Ilovan, 2007).

Roegiers (1998) presented the following features as characteristic of capacity:

- *Transversality*. Most capacities are transversal meaning that one may use them within different subject matters, at different levels.

- *The evolution attribute.* Capacities evolve during one's life span through exercises reaching the status when: one does something quicker, one does something more precisely, one is surer of himself or herself when doing something, one is more spontaneous. A person develops his or her capacities differently from another one. Capacities extant at one's birth develop faster or slower, in stages or progressing to the end of one's life or may degrade after a certain age.

- *Transformation.* Capacities interact in real situations with the contents, with environmental factors, with other capacities, they combine with other capacities and what results is richer and operational capacities (to read, to write, to calculate, to take notes, to argue, to negotiate, to organise, to discriminate the essential from the secondary, etc.). These complex capacities become schemes, automatisms that some authors refer to as "general competencies", "key-competencies" or "transversal competencies". Roegiers considered that these complex capacities became complex if phrased according to a certain situation.

- *Non-assessment.* One cannot assess capacities, but one can assess their use in certain contexts. We underline that a capacity, although it is mostly the *result* of exercises, it is not an obvious, visible result that one can assess.

We consider that an essential feature of capacity is potentiality.

- *Potentiality.* As a neuropsychical feature, capacity is a potential that a person activates when doing an operation or an activity. One person may have certain capacities (he or she has potential), but decides to use it according to certain criteria (for instance, we have the capacity to hit somebody, but taking into account certain moral values, we do not use that potential that way).

The meaning of the concept of capacity is close to the ones of skill and aptitude. In dictionaries, *the skill* has several attributes: dexterousness, knack, talent, mastery, art (DEX); skilful character, the capacity to do everything easily, art; knack, dexterousness, mastery, skilful manifestation, a thing or an activity that a person does with ingenuity and fineness (NODEX); the quality of being skilful, dexterity, mastery, art, aptitude related to doing something (MDN). Dulamă and Ilovan (2007) considered the intellectual or the movement skill as a learnt way of giving suitable answers to a sum or category of tasks in a certain field. As compared to capacities, skills have several features:

- They are *the result of a learning process*, while capacities may exist from birth, to be or not be developed later on.

- As different from capacities, that one may put on different evolution levels, skills are procedural knowledge (*savoir-faire* – to know to do; this type of knowledge gives one the opportunity to act upon reality through operators and operations, cf. Brien, 1997) that have reached a *superior development level* (mastery, perfection).

- As different from capacities, that are hidden, skills are *visible* (dexterity).

- *Assessment.* One may assess skills.

In dictionaries, they define *competency* as: somebody's capacity to judge something as a result of that person's deep understanding of the respective matter; the capacity pertaining to an authority or to a clerk etc. to exercise certain attributions (DEX); a sum of pieces of theoretical and practical information (NODEX); somebody's capacity to judge certain matters, to do something, aptitude, quality pertaining to a certain authority or to a clerk of having certain attributions (DN, MDN).

In scientific papers, the concept of competency has different meanings:

- *subject matter competency*, meaning especially procedural knowledge ("*savoir-faire*"), close as meaning to the English term "skill" (e.g. measuring air temperature with a thermometer);

- they considered "*savoir-faire*" at a general knowledge level (Rey, Romanville et al.) as competencies: argumentation, structuring of one's own thoughts, information synthesising, translation into another idiom, information management, time management, information research, oral and written presentation, assessment, testing, etc.

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- putting into context the *acquis* (knowledge, ability, habituations), being used in a certain context while *context is part of the competency*. The English “competency” (competență) is different from “skills” (Perrenoud, Le Boterf, De Ketele, Roegiers).

- somebody’s capacity to do a certain task that asks for a high number of operations (Brien, 1997).

- a sum of declarative knowledge, procedural knowledge, and attitudes that somebody has and that he or she activates (transforms and integrates) in planning and doing a particular task (Brien, 1997) in a certain field, in a certain case. A competency is the capacity to exploit one’s own knowledge in order to solve a task, and behaviour is an exterior manifestation of the respective competency.

Roegiers (1998) underlined that a competency had five essential features:

- *It supposes that somebody calls up a sum of resources* (different knowledge types, as well as different types of experiences, capacities, schemes, automatisms, etc.).
- *The final character*. It supposes that somebody calls up a sum of resources in order to create a product, in order to do something, or to solve a problem.
- *It supposes a relationship with a sum of situations*. One calls up his or her resources in a larger and fixed context, while one develops his or her capacities through practising on varied and unlimited contents. The competency of writing a paper in secondary school is different from the one of writing a paper during one’s PhD thesis elaboration. The two competencies observe different rules and the two situations are different (literature, information quantity, the rules to be observed). Roegiers considered that a competency could form in only one situation, this being a reproduction, and we consider that the respective person would achieve procedural knowledge or a skill. Roegiers also stated that if a competency appeared in a larger array of situations, one could not underline that person’s competency at a certain time.

Roegiers highlighted that one may define a competency on a situation axis. For instance, competency 1 consisted of elaborating an hypothesis on the causes or on the consequences of global warming and competency 2 referred only to one cause (either fuel burning or volcanic activity) or to the consequences of global warming on a certain place on the Terra (e.g. in Romania). For these competencies, one should have taken into account different situations, different capacities, and development levels.

- *Frequent subject matter features*. Capacities have transversal character, but competencies have subject matter character according to particular subject matter issues. Only certain competencies particular to different subject matters are easy to transfer. For instance, the competency to analyse a forest from a geographical point of view is not identical to that of analysing a forest from the biological point of view. Both specialists elaborate a plan for analysing the respective forest, they research, do a bibliographical list, identify the relationships between the forest and the environment, but each one focuses on other aspects: the biologist, for instance, decomposes the forest system for analysis while the geographer analyses the forest system as a whole. Their competencies are distinct as the rigours pertaining to the respective sciences differ and each specialist analyses the forest taking into account knowledge characteristic of his or her field. Still, there are certain general competencies, valid for both fields and more, such as to lead a debate with students during the class or to give a test to a group.

- *Assessment*. One may assess a competency only assessing the quality of the process of solving the task and the quality of the result.

- *The level of the competency*. Beside the features that Roegiers mentioned, we added that somebody might have developed a certain competency to a certain level. For instance, a university student elaborated a hypsometric map for his or her final paper would have had to observe rather harsher rules, while a geomorphologist who elaborated a map for a scientific paper would have surprised the erosion levels or the river terraces through a selective representation of the level curves.

### 3. Material and method

In order to reach the second purpose of our study, we analysed Geography high school curricula in Romania. First we studied the way they phrased general competencies that students should have developed with teachers' help during those four years, then how they phrased particular competencies as derived from the ones mentioned above that students should have developed during one single school year. For each competency we decided if they phrased it correctly, partially correctly or wrongly. We listed correctly or partially correctly phrased particular competencies and we rephrased them.

In order to reach the second purpose of our study we realised a research during the "Development of Subject Matter Skills and Competencies" course during the continuous teacher training programme Eduexpert I, organised by the Teacher Training Department of "Babeş-Bolyai" University in Cluj-Napoca. This course was eight hours long and 112 teachers participated, while 8 of them taught Geography. In this study we analysed the way Geography teachers solved only one of their tasks, that of listing competencies that students could acquire during Geography classes, while we asked for no minimum or maximum number of competencies. We offered all teachers the necessary information on defining the concepts of capacity, skill, and competency as well as other theoretical information with examples. During practical activities, teachers worked in groups according to their specialty. They discussed the lists with skills and competencies and had the opportunity to create a single list.

When we analysed the competencies that the Geography teachers had phrased, we established whether they had phrased them in a correct or in a wrong way. We introduced the incorrect competencies in a table while grouping them into two categories: subject matter competencies and general ones. After each competency we used a symbol (●) indicating the number of teachers who had mentioned it.

### 3. Results and discussions

#### a) Analysis of the competencies from Geography high school curricula

*General competencies* for the inferior high school cycle are the following: 1. Using correctly particular terminology in order to explain the geographical environment using idioms; 2. Relating the significant elements of society, science, and of technology to the environment as a whole and to its component systems; 3. Integrating aspects from nature and society into an objective structure (the environment) and into a synthesis subject matter (Geography); 4. Relating elements and phenomena from reality (nature and society) to their cartographical, graphical elements in satellite images and models; 5. Achieving skills and general learning methods and techniques (including ICT) that would facilitate an assumed permanent training. *The general competencies* for the superior high school cycle are the following: 1. Using appropriate terminology and particular idioms in order to explain the geographical environment; 2. Relating the significant elements of society, science, and of technology to the environment as a whole and to its component systems; 3. Relating elements and phenomena from reality, from nature and society, to their cartographical and graphical representations on models.

Taking into account the features of the competency that Roegiers identified, we considered that they did not phrase correctly those competencies and that hindered high school students' development and assessment.

**Table 1.** Number of particular/subject matter competencies associated to general competencies

No. of general competency	Number of particular competencies associated to the general competency			
	The 9 <sup>th</sup> grade	The 10 <sup>th</sup> grade	The 11 <sup>th</sup> grade	The 12 <sup>th</sup> grade
1	4	3	5	5
2	5	5	8	9
3	2	2	4	6
4	6	6	-	-
5	9	9	-	-
6	2	2	-	-

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Out of the particular competencies in the curriculum for Geography, in high school, we consider to be phrased correctly or partially correctly only 5 for the 9<sup>th</sup> grade, 1 for the 10<sup>th</sup> grade, 4 for the 11<sup>th</sup> grade, and 8 for the 12<sup>th</sup> grade.

**Table 2.** *Correctly or partially correctly phrased competencies in the curriculum. Rephrased competencies*

Grade	Correctly or partially correctly phrased particular competencies in the curriculum	Rephrased competencies
the 9 <sup>th</sup>	1.4. Describing and explaining the natural environment	Describing certain environmental types (e.g. natural) Explaining certain environmental types (e.g. natural)
	4.5. Elaborating simple cartographical sketches	Elaborating cartographical sketches
	4.5. Writing structured texts using cartographic and graphic information	Writing scientific texts Writing essays Writing papers
	4.6. Describing and explaining facts noticed during fieldwork or identified on models	Describing facts noticed during fieldwork Describing facts noticed on models Explaining facts noticed during fieldwork Explaining facts noticed on models
	5.7. Using experimental and simulation models	Doing experiments Doing simulations
the 10 <sup>th</sup>	4.5. Elaborating simple cartographical sketches	Elaborating cartographical sketches
the 11 <sup>th</sup>	1.3. Explaining researched reality (directly or indirectly), using scientific language particular to that field	Investigating geographical processes Studying certain cases Explaining geographical processes, etc.
	1.5. Formulating problems related to regionalisation and globalisation, using correct and coherent terminology characteristic of that field	Formulating certain issues related to regionalisation Formulating certain issues related to globalisation
	2.1. Explaining natural geographical processes from reality reflecting phenomena and processes studied during Natural Science classes (Physics, Biology, Geology, Chemistry)	Explaining natural geographical processes
	*2.6. <i>Elaborating territorial development projects</i>	Elaborating one territorial development project
the 12 <sup>th</sup>	1.3. (identical to the 11 <sup>th</sup> grade)	
	1.5. (identical to the 11 <sup>th</sup> grade)	
	2.1. Explaining natural processes at the continental level, through connections suggested by the analysis of graphical, cartographical models, and of images	Explaining natural continental processes starting from graphical and cartographical models and from images
	*2.6. <i>Elaborating territorial development models that include elements of Social and Cultural Geography</i>	
	**2.8. <i>Elaborating territorial development projects that include elements of Geography of the tertiary sector and of administration</i>	
	3.1. Interpreting graphical and cartographical representations in order to present researched reality	Interpreting graphical representations Interpreting cartographical representations

3.4. Interpreting statistical data and graphical models of Europe, E.U., Romania, and of the contemporary world	Interpreting statistical data Interpreting graphical models
*3.5. Doing minimal graphical and cartographical representations using given information	Doing graphical representations Doing cartographical representations

### b) Analysis of the competencies that Geography teachers proposed

While assessing the portfolios that Geography teachers elaborated, our first conclusion was that they presented different lists of competencies although they could elaborate a single one, as a result of their group work during the practical activities of the course. Secondly, we noticed that teachers inserted into their lists competencies we offered in our course, but without including all possible ones and added new competencies. Thirdly, we noticed that teachers included both subject matter competencies and general ones. They could have phrased some of the respective general competencies in order to obtain a subject matter one, such as analysing the photo of a certain type of landscape, realising a poster on a geomorphologic process. In the table below we included competencies teachers wrote exactly as they wrote them. The group of teachers phrased correctly 41 subject matter competencies and 48 general ones.

**Table 3.** *Subject matter competencies and non subject matter (general) competencies phrased by Geography teachers*

Subject matter competencies	Non subject matter/general competencies
1. Analysing the components of a human settlement ●	1. Information management ●
2. Analysing stages and types of urban development ●	2. Time management ●
3. Analysing information related to ... (human settlements) ●	3. Analysing diagrams ●
4. Analysing major issues of the world ●	4. Analysing photos ●●
5. Analysing the relationship between resource repartition and economic capitalising ●	5. Analysing productions ●
6. Analysing the relationship between ... (the global, the regional, the national, and the local dimension of the social and economic component of the geographical space) ●	6. Analysing texts ●
7. Analysing a map ●	7. Applying a knowledge test to a group ●●
8. Analysing a forest ●	8. Argumentation ●●
9. Analysing a document characteristic of a certain scientific field ●	9. Giving arguments for a syntagm ●●
10. Analysing landscape ●●	10. Argumentating in a polemic ●
11. Analysing a certain process (e.g. urbanisation) and its impact on environment ●	11. Self-assessment ●●
12. Analysing land use in an agricultural area ●	12. Researching for information ●●●
13. Characterising a geographical region ●	13. Computer assisted communication ●
14. Mapping ●	14. Cooperation with colleagues ●●
15. Geomorphologic mapping ●●●	15. Defining concepts ... ●
16. Comparing the economic evolution of two states ●	16. Elaborating and presenting orally (panel, dissertation, oral exam, radio news, TV news) ●●●●
17. Filling in a mute map ●	17. Elaborating items ●
18. Leading a debate on geographical issues ●●	18. Oral presentation ●●●●
19. Creating a landform (a model) according to the method ... ●●	19. Written presentation ●●●●
20. Doing a cartographical representation ●	20. Elaborating a hypothesis ●
21. Doing a graphical representation ●	21. Identifying information sources and useful information in the mass media ●
22. Doing an investigation algorithm of a geographical phenomenon starting from a real case study ●	22. Interpreting diagrams ●
	23. Interpreting photos ●●●
	24. Interpreting sketches ●●●
	25. Interpreting models ●
	26. Interpreting documents characteristic of a certain scientific field ●
	27. Interpreting a text ●
	28. Presenting information structured assisted by a computer ●
	29. Doing research in a certain field ●
	30. Doing an investigation ●
	31. Realising a production ●

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<ul style="list-style-type: none"> <li>23. Deducing the causes of geographical phenomena (natural, economic, and social) ●●</li> <li>24. Describing a geographical phenomenon ●●●</li> <li>25. Describing a certain geographical environment ●</li> <li>26. Describing a certain type of landscape ●</li> <li>27. Drawing a panoramic sketch ●●</li> <li>28. Elaborating a hypsometric map ●●●●</li> <li>29. Elaborating a thematic map ●</li> <li>30. Explaining the particular features characteristic of a certain type of geographical environment ●</li> <li>31. Taking photos of a certain landscape type ●</li> <li>32. Identifying the components of a human settlement ●</li> <li>33. Identifying ways of preventing environmental degradation ●</li> <li>34. Identifying geographical problems (Political Geography) ●</li> <li>35. Interpreting town plans ●</li> <li>36. Interpreting maps ●●●</li> <li>37. Geographical location of soil and underground resources ●</li> <li>38. Field orientation ●</li> <li>39. Foreseeing the evolution of certain phenomena (natural, economic, and social) ●●</li> <li>40. Solving a Geography test ●</li> <li>41. Identifying the significance of resource location and of their impact on environment in what their exploitation is concerned ●</li> </ul>	<ul style="list-style-type: none"> <li>32. Realising graphs on computer ●</li> <li>33. Elaborating a sketch ●●●</li> <li>34. Creating a moulding ●</li> <li>35. Elaborating a portfolio ●●●</li> <li>36. Elaborating a poster ●●●</li> <li>37. Writing a paper ●</li> <li>38. Elaborating one's own text (a touristic folder, an abstract, a quintet) ● ●●</li> <li>39. Solving a problem-situation ●●</li> <li>40. Writing an article in a certain field of research ●●●</li> <li>41. Synthesising ●●●●</li> <li>42. Using computer for accessing information ●</li> <li>43. Using computer for depositing information ●</li> <li>44. Using an argumentative system ●</li> <li>45. Assessment ●●●</li> <li>46. Testing ●●●</li> </ul>
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They phrased incorrectly 22 competencies, while 14 of these (the *Italic* written ones) belonged to only one of the teachers, as a result of that person's absence during the practical activities we organised and assisted. It might have been that that teacher did not receive our course support material or did not study it enough.

**Table 4.** *Competencies that Geography teachers phrased incorrectly*

<ul style="list-style-type: none"> <li>1. calculating density of population ●●●</li> <li>2. to define criteria for grouping states ●</li> <li>3. to recognise changes on the political map ●</li> <li>4. correct use of proper names ●</li> <li>5. using information from mass media systems ●</li> <li>6. <i>using some analysis methods ●</i></li> <li>7. <i>using certain experimental and simulation methods●</i></li> <li>8. <i>using civic knowledge ●</i></li> <li>9. <i>acknowledging the intention of rationally arrangement of the inhabited space ●</i></li> <li>10. <i>using business management elements for territorial protection ●</i></li> <li>11. <i>using particular subject matter technology ●</i></li> <li>12. <i>using graphical and cartographical representations ●</i></li> </ul>	<ul style="list-style-type: none"> <li>13. <i>understanding the particular features of the environment ●</i></li> <li>14. <i>formalising information related to the surrounding reality ●</i></li> <li>15. <i>accessing cartographical information ●</i></li> <li>16. <i>operating with symbols and signs ●</i></li> <li>17. <i>conventions, building a critical, constructive behaviour●</i></li> <li>18. <i>using the technology of efficient bibliographical research ●</i></li> <li>19. <i>transferring from one scale to another ●</i></li> <li>20. translating from one language into another●●</li> <li>21. completing ●</li> <li>22. asking questions ●</li> </ul>
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#### 4. Conclusions

We started this study from the concept of competency, as a sum of declarative knowledge, procedural knowledge, and attitudes characteristic of certain people and that one activated (transformed and integrated) while planning and doing a certain task (Brien, 1997) in a certain field, in a certain situation. Roegiers (1998) underlined that a competency had five essential features: one used a sum of resources (diverse knowledge types, experience, skills, schemes, automatisms, etc.); a finalised character; relation to a sum of situations; usually characteristic to a certain field; one may assess it, and we added another feature, that of the level of competency.

Our study focused on analysing competencies in high school curricula. We reached the conclusion that, taking into account the features of the competency as analysed by Roegiers, they did not phrase correctly general competencies and that prevented high school students' development and assessment. Out of all particular competencies they phrased correctly or partially correctly only 5 for the 9<sup>th</sup> grade, 1 for the 10<sup>th</sup> grade, 4 for the 11<sup>th</sup> grade, and 8 for the 12<sup>th</sup> grade.

The purpose of our study was to analyse the competencies that 9 Geography teachers phrased after undergoing a teacher training course on "Developing Skills and Competencies in Geography". We noticed that: teachers presented lists including different competencies; they included competencies listed in our course, but without inserting all the possible ones and added new competencies; they included both subject matter competencies and non subject matter ones (or general ones); the group of teachers phrased 41 subject matter competencies and 48 general ones and phrased incorrectly 22 competencies, and these demonstrated that this course was an efficient one.

#### Literature

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